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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,262

02/22/2005

Akira Nakano

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EXAMINER

WEINSTEIN, LEONARD J

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/525,262

Applicant(s)

NAKANO ET AL.

Examiner

Leonard J. Weinstein

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This office action is in response to the amendment of July 26, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 and 5 are rejected under 35 U.S.C. 102(a) as being anticipated by Lee et al. 6,446,454. Lee teaches all the limitations as substantially claimed for a hermetic compressor including: an electric motor unit 8, a compressing unit 18 driven by the electric motor unit 8, a hermetic container 6 accommodating the electric motor unit 8 and the compressing unit 18, a compressing room, as defined within element 6 and surrounding elements 8, 10, and 20 as shown in figure 1, having an opening 22, wherein the compressing unit 18 comprises a suction valve (col. 3 ll. 47) disposed at the opening of the compressing room and a suction muffler (fig. 4) having a suction muffler body 200 forming a sound-deadening space 24b (col. 4 ll. 29-36), a first communicating path 26 communicating with the suction valve (col. 3 ll. 47) and with the sound-deadening space 24b, and a second communicating path 25 communicating with the hermetic container 18, via element 22, and with the sound-deadening space 24b, via element 24a, wherein an opening, section of element 26 facing to element 42, which is situated in the sound-deadening space 24b of the first communicating path 26, and an opening, section of element 25 facing element 42, which is situated in the sound-deadening space 24b, of the

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second communicating path 25 are open in a substantially identical direction (fig. 4), wherein a wall, as defined by a bottom surface of element 200 attached to element 42 via element 43 as shown in the embodiment of figure 4, of the suction muffler body 200 has an integrally formed sound-insulating wall 42 at a place at least confronting both of the openings, sections of elements 25 and 26 facing element 42, situated in the sound-deadening space 24b, and wherein the sound-insulating wall 42 and a wall 50 of the suction muffler body form a blocked space (fig. 4); and a sound-insulating wall 42 that works as a guiding wall for guiding gas sucked from a second communicating path 25 to a first communicating path 26 smoothly (fig. 6; col. 4 ll. 55-63).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 5, and 7 are rejected under 35 U.S.C 103 (a) as being unpatentable over

Todescat et al. 4,911,619 in view of Lee et al. 6,446,454, further in view of Ono et al.

6,155,067. Todescat teaches all the limitations as claimed for a hermetic compressor including:

an electric motor unit 6, a compressing unit 15 driven by the electric motor unit 6, a hermetic container 3 accommodating the electric motor unit 6 and the compressing unit 15, wherein the compressing unit 15 comprises, a compressing room 10 having an opening 130, a suction valve 11 disposed at the opening 130 of the compressing room 10, and a suction muffler 100 having, a suction muffler body 110 forming a sound-deadening space, elements 111 and 112 as shown in figure 4, a first communicating path 115b communicating with the suction valve 11, via

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element 122, and with the sound-deadening space, elements 111 and 112, and a second communicating path 115a communicating with the hermetic container, via element 113, and with the sound-deadening space, elements 111 and 112, wherein an opening 116, which is situated in the sound-deadening space, elements 111 and 112, of the first communicating path 115b, and an opening 117, which is situated in the sound-deadening space, elements 111 and 112, of the second communicating path 115a open in a substantially identical direction, as shown in figure 4; a suction muffler 100 is made formed of at least two components, elements 110 and 120, and the first communication path 115b and the second communication paths 115a open in a horizontal direction, via elements 116 and 117 respectively, as shown in figure 4. Todescat fails to teach the following limitations that are taught by Lee a suction muffler for a hermetic compressor provided with a wall, as defined by a bottom surface of element 200 attached to element 42 via element 43 as shown in the embodiment of figure 4, of the suction muffler body 200 has an integrally formed sound-insulating wall 42 at a place at least confronting both of the openings, sections of elements 25 and 26 facing element 42, situated in the sound-deadening space 24b; and wherein the sound-insulating wall 42 and a wall 50 of the suction muffler body form a blocked space (fig. 4); a sound-insulating wall disposed vertically with respect to an opening face of a suction muffler body 200 (fig. 6); and a sound-insulating wall 42 that works as a guiding wall for guiding gas sucked from a second communicating path 25 to a first communicating path 26 smoothly (fig. 6; col. 4 ll. 55-63). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a suction muffler for a hermetic compressor with a sound insulating wall disposed in front two openings formed within a pathway for a refrigerant flow to a suction valve in order to attenuate a noise of a specific frequency (Lee – col. 2 ll. 46-54).

A combination of Todescat and Lee as discussed but fails to teach the limitation that is taught by Ono for a hermetic compressor provided with a suction muffler 16 made of a synthetic resin (Ono – col. 4 ll. 39-43) for the purposes of providing a suction muffler with low thermal conductivity (Ono- col. 2 ll. 25-26). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a suction muffler for a hermetic compressor made from synthetic resin type in order to provide a muffler with a low thermal conductivity (Ono- col. 2 ll. 25-26).

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. 6,446,454 in view of Myung et al. 2002/0090305. Lee teaches all the limitations as substantially claimed for hermetic compressor but fails to teach the limitation that is taught by Myung for a sound-attenuating wall working as a guide wall 131 within a suction muffler body having a U-shaped cross-section when viewed from a sectional perspective. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sound attenuating wall 42 of Lee in to the shape of a U in order to minimize the resistance to flow of refrigerant within a suction chamber of a hermetic compressor (Myung - 0030).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-3 and 5-6, filed July 26, 2007, have been fully considered but they are not persuasive. The rejections of claims 1-3 and 5-6 have been modified in response to the applicant's amendment.

With respect to the Lee reference the applicant argues that Lee does not teach a second communication path communicating with the hermetic container and with the sound deadening space. The applicant also argues that a second connection tube of Lee does not directly communicate with a hermetic container. The applicant argues that a vibration plate of Lee

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substantially reduces sound absorbing effectiveness. The applicant argues that Lee does not teach a static guide wall that is integrally formed with the wall of a muffler body. The applicant also argues that one of ordinary skill in the art would not have reconfigured Lee according to the teaching of Myung and that Lee teaches away from instant invention as claimed.

With respect to applicant's argument that Lee does not teach a second connection tube communicating with, and further in direct communication with, a hermetic container the examiner disagrees. Lee teaches an opening 22 disposed within chamber 24a in direct communication with a hermetic container 6. Lee's second communication tube, element 25, is in communication with element 22 as each component is formed with an opening disposed in a common chamber 24a. Therefore the second communication tube, element 25, is put into communication with the hermetic container via the chamber shared by both elements 22 and 25. It is further noted that element 25 is inherently in communication with the hermetic container 6 in the respect that the two elements would have to be in communication in order for a refrigerant to pass from the hermetic container to a suction valve of a compressing unit. With respect to applicant's argument that the second communication tube of Lee does not directly communicate with a hermetic container the examiner notes that applicant is arguing more than that which is claimed. Claims 1 and 5 of the instant application do recite the limitation of a direct communication between a second communication tube and a hermetic container, but claims that the two components merely be in communication with one another.

With regards to applicant's argument that a vibration plate of Lee substantially reduces sound absorbing effectiveness, the examiner disagrees. Specific reference is made to column 4 lines 31-36 in which Lee discloses "The refrigerant gas subjected to a pressure drop for the first time in the first chamber 24a is introduced into the second chamber 24b, and is involved in

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pressure and temperature drop with an attenuation of noise for the second time as the refrigerant is involved in a sharp volumetric expansion in the second chamber 24b."

With regards to applicant's argument that Lee does not teach a static guide wall that is integrally formed with the wall of a muffler body, the examiner disagrees. The examiner notes that the limitations as claimed do not require a sound insulating wall to be disposed in a static orientation. Further, in the embodiment in figure 4 and cited above, Lee teaches a sound insulating wall 42 integrally formed with a suction muffler wall as element 42 is connected to the bottom surface of the muffler by spring element 43. Further the examiner points to the term "integral" as being sufficiently broad to embrace constructions united by such means as fastening and welding (in re Hotte (C.C.P.A.) 157 U.S.P.Q. 326); the term is not necessarily restricted to a one-piece article (in re Kohno (C.C.P.A.) 157 U.S.P.Q. 275); and may be construed as relatively broad (in re Dike (C.C.P.A.) 157 U.S.P.Q. 581). With regards to applicants argument that that one of ordinary skill in the art would not have reconfigured Lee according to the teaching of Myung, and that Lee teaches away from instant invention as claimed, the examiner disagrees. The sound insulating wall 42 of Lee serves to attenuate a noise generated by a flow of refrigerant, in addition to being a vibration plate disposed to increase a supply of refrigerant, as disclosed by Lee in column 4 line 58. Therefore as the plate of Lee serves to increase a flow of refrigerant it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the sound attenuating wall 42 of Lee in to the shape of a U in order to minimize the resistance to flow of refrigerant within a suction chamber of a hermetic compressor (Myung - 0030).



***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are cited on form 892 herewith.
8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard J. Weinstein whose telephone number is (571) 272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

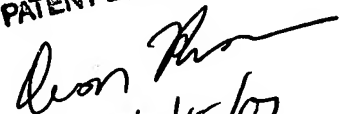
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Karmer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
LJW

DEVON C. KRAEMER  
PATENT EXAMINER

  
10/15/07